Please replace all prior claims in the application with the following amended claim set:

1. (Original). A method for identifying a modulator of N-methyl-D-aspartate receptor (NMDA-R) signaling activity, comprising detecting the ability of an agent to modulate the phosphatase activity of a protein tyrosine phosphatase with said NMDA-R ~~on a substrate~~ or to modulate the binding of the protein tyrosine phosphatase to NMDA-R, thereby identifying the modulator, wherein the protein tyrosine phosphatase is capable of directly or indirectly dephosphorylating NMDA-R.

2. (Original). The method according to Claim 1, wherein said protein tyrosine phosphatase is capable of dephosphorylating a protein tyrosine kinase (PTK), which PTK phosphorylates NMDA-R.

3. (Canceled).

4. (Original) The method of claim 1, wherein the protein tyrosine phosphatase is human.

5-6. (Canceled)

7. (Currently amended). A method for identifying an agent as a modulator of NMDA-R signaling, comprising:

(a) contacting

(i) the agent;

(ii) a protein tyrosine phosphatase and a protein tyrosine kinase (PTK) that phosphorylates NMDA-R; and

(iii) NMDA-R or a subunit thereof;

wherein either or both of (ii) and (iii) is substantially pure or recombinantly expressed;

(b) measuring the tyrosine phosphorylation level of the NMDA-R or subunit;

(c) comparing the NMDA-R tyrosine phosphorylation level in the presence of the agent with the NMDA-R tyrosine phosphorylation level in the absence of the agent,

wherein a difference in tyrosine phosphorylation levels identifies the agent as a modulator of NMDA-R signaling.

8-13. (Canceled).